Karan Gurazada

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Education

The University of Texas at Austin — Class of 2025

- Bachelor's of Science in Computer Science
- Honors Programs: Turing Scholars, Dean's Scholars
- Relevant coursework: Honors Data Structures and Algorithms, Honors Discrete Mathematics, Statistics and Probability, Honors Computer Organization and Architecture

Leigh High School, San Jose, CA — Class of 2021

- Valedictorian, National Merit Scholar
- Relevant coursework: Digital Electronics, Engineering Design and Development
- Student organizations: Coding Club (Co-President), Cybersecurity Club (Co-President)

Stanford Online High School, Redwood City, CA — Class of 2021

- Dual enrollment with Leigh High School in order to take advanced classes
- Relevant coursework: Data Structures and Algorithms, Multivariable Calculus, Linear Algebra, Differential Equations, Real and Complex Analysis, Quantum Computing

Computer Science Experience and Projects

- Languages: Java, Python, JavaScript, R, C++, Elixir, Shell, Go, Perl, Julia, OpenQASM
- Libraries: node.js, express.js, flask, jQuery, react.js, AngularJS, Electron, numpy, dplyr, Jetty
- Systems: Linux systems design, MongoDB, SQL

NeuHope, Inc. — Software Engineer Intern (San Jose, CA), June to December 2020

- Built backend and user interface for Google Home and Alexa apps
- App connects patients with doctors, facilitates their recovery, provides additional support
- Stack: node.js, express.js, AWS Lightsail, Google Home, Alexa

Discord Tournament Bot

- Uses popular chat platform Discord to run online Science Bowl/quizbowl tournaments
- Used by over 100 tournaments worldwide during the pandemic
- Stack: node.js, Discord.js

Ising

- Graphical simulation of Ising model for ferromagnets using Metropolis algorithm, Boltzmann factors
- Stack: Java, Swing

Buzzinga

- Simulates a Science Bowl/quizbowl game buzzer on local network
- Free replacement for physical buzzer intended for low-income schools
- Stack: node.js, Electron

Research Papers

- "An Analysis of Quantum Mechanics using Real, Quaternion, and Octonion Probability Amplitudes"
- "A Review of the OpenQASM Quantum Assembly Language"